## PATENT ABSTRACTS OF JAPAN

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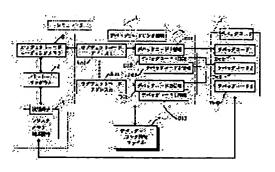
03.09.1998 (72)Inventor: AKIYOSHI

**KUNIHIRO** 

## (54) SIMULATOR

(57) Abstract:

PROBLEM TO BE SOLVED: To easily perform various processes such as graph display with good reproducibility while evading bug mixture and to improve debugging efficiency by executing debug codes linked with addresses of execution objects of object codes by link information at the time of object code execution in synchonization with the execution of the object codes in the addresses.



SOLUTION: The simulator 1 checks whether pieces Di1 to Din of debug code information are registered in debug code link information 4 corresponding to object code addresses Ao1 to Aon of current execution and simulates them by executing the instructions of the

object codes as they are when not registered. When they are registered, it is checked whether or not debug codes Dc1 to Dcn linked by the pieces Di1 to Din of debug code information are execution objects according to valid/invalid information on the debug code link information 4, and processings are executed for the debug codes Dc1 to Dcn which have made the execution-valid calls.

## LEGAL STATUS

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TITLE: Simulator for debugging program information,

has <u>debug</u>

code link data file to link debug code with

respective

object code addresses to debug program

synchronizing with

praxis of executed object code

PRIORITY-DATA: 1998JP-0265721 (September 3, 1998)

**PATENT-FAMILY:** 

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**MAIN-IPC** 

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INT-CL (IPC): G06F011/28

ABSTRACTED-PUB-NO: JP2000076094A

**BASIC-ABSTRACT:** 

NOVELTY - A debug code (6) for performing a predetermined process is produced using a high level language and is compiled. A <u>link information</u> is comprised

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in a debug code link information file (7) to link the debug code with respective object code addresses (Ao1-Aon). When the object code is executed, the linked debug code is performed synchronizing with the praxis of the executed object code.

USE - For debugging program formulated in high level language.

ADVANTAGE - An efficient simulation is performed by securing the

reproducibility of the combination of several debug codes and shortening

debugging time. The debug efficiency is increased by continuous visual

observation of internal parameter of the program.

**DESCRIPTION OF DRAWING(S) - The figure shows a conceptual diagram of the simulator.** 

Debug code 6

j• • i

**Debug code link** information file 7

Object code addresses Ao1-Aon

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**Basic Abstract Text - ABTX (1):** 

NOVELTY - A debug code (6) for performing a predetermined process is

produced using a high level language and is compiled. A <u>link</u> information is

comprised in a debug code link information file (7) to link the debug code with

respective object code addresses (Ao1-Aon). When the object code is executed,

the linked debug code is performed synchronizing with the praxis of the executed object code.

Basic Abstract Text - ABTX (6):

<u>Debug code link</u> information file 7

**Title - TIX (1):** 

Simulator for debugging program information, has <u>debug code</u> link data file

to <u>link debug code</u> with respective object code addresses to debug program

synchronizing with praxis of executed object code

**Standard Title Terms - TTX (1):** 

SIMULATE DEBUG PROGRAM INFORMATION <u>DEBUG CODE</u>

<u>LINK</u> DATA FILE <u>LINK DEBUG</u>

<u>CODE</u> RESPECTIVE OBJECT CODE ADDRESS DEBUG PROGRAM EXECUTE OBJECT CODE